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ABSTRACT

This report describes the Success for All program, and reports results of a full-year evaluation of the program in an urban elementary school. Success for All, which concentrates resources in grades pre-K to 3, uses research-based instructional programs to bring participants to the third grade with adequate reading, mathematics, and language skills. Elements of the program include reading tutors, regrouping for reading instruction according to performance levels, reading assessments every 8 weeks, preschool and kindergarten programs, parenting education and parent participation efforts, a program facilitator, in-service teacher education, an advisory committee, and no assignment of pupils to special education resource services for reading problems. Evaluation data indicate that program participants outperformed control school children on multiple individually administered measures and on California Achievement Test measures in grades 2 and 3. Participants scored at about the 50th percentile on individually administered measures, compared to a control school average of about the 28th percentile. It is concluded that continued success of the 5-year program in full-year evaluations will demonstrate that high rates of learning problems can be prevented by the schools. (RH)

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Report No. 30

March, 1989

SUCCESS FOR ALL: FIRST-YEAR EFFECTS OF A COMPREHENSIVE PLAN FOR REFORMING URBAN EDUCATION

Nancy A. Madden, Robert E. Slavin, Nancy L. Karweit,
Barbara J. Livermon and Lawrence Dolan

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The Center

The mission of the Center for Research on Elementary and Middle Schools is to produce useful knowledge about how elementary and middle schools can foster growth in students' learning and development, to develop and evaluate practical methods for improving the effectiveness of elementary and middle schools based on existing and new research findings, and to develop and evaluate specific strategies to help schools implement effective research-based school and classroom practices.

The Center conducts its research in three program areas: (1) Elementary Schools; (2) Middle Schools, and (3) School Improvement.

The Elementary School Program

This program works from a strong existing research base to develop, evaluate, and disseminate effective elementary school and classroom practices; synthesizes current knowledge; and analyzes survey and descriptive data to expand the knowledge base in effective elementary education.

The Middle School Program

This program's research links current knowledge about early adolescence as a stage of human development to school organization and classroom policies and practices for effective middle schools. The major task is to establish a research base to identify specific problem areas and promising practices in middle schools that will contribute to effective policy decisions and the development of effective school and classroom practices.

School Improvement Program

This program focuses on improving the organizational performance of schools in adopting and adapting innovations and developing school capacity for change.

This report, prepared by the Elementary School Program, describes the effects of a full-year implementation of the Success for All program in an urban elementary school.

Abstract

Success for All concentrates resources in grades pre-K to 3 and uses instructional programs based on the best available research evidence to address its goal: to bring every child in an inner-city elementary school to the third grade with adequate reading, mathematics, and language skills. This report describes the Success for All program and reports the results of an evaluation of the program over a full year in an urban elementary school. Success for All children outperformed control school children on muliple individually administered measures and on California Achievement Test measures in grades 2 and 3. In general, by the end of the first year, Success for All children at all grade levels scored at about the 50th percentile on individually-administred measures, compared to a control school average at about the 28th percentile.

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Every child can learn. Yet in every school, there are those who do not. These children usually fail to master basic skills in the early elementary grades and then begin a declining spiral of poor performance, poor motivation, poor attendance, delinquent behavior, and ultimately dropout. Such children often receive Chapter 1 or other remedial services for many years, yet such programs rarely do more than help them avoid falling even further behind (Kennedy, Birman, & Demaline, 1987). Many are assigned to special education programs for the learning disabled, which also have limited evidence of effectiveness (Madden & Slavin, 1983).

The declining spiral begins very early in students' school careers. By the third grade, we can predict with remarkable accuracy which students will drop out (Kelly, Veldman, & McGuire, 1964; Lloyd, 1978). Key predictors include poor reading performance and retention in grade. Reaching the third grade on time with adequate basic skills may not provide a guarantee that a student will complete his or her education, but it appears that students who do not reach third grade on time with adequate skills have little chance of educational success, regardless of the remedial or special education resources invested in them later in their school careers.

Clearly, the time to intervene with students at risk of school failure is early. But how early? Evaluations of Head Start and other preschool programs and of extended-day kindergarten programs find initial effects on student performance, but these tend not to be detectable after two or three years (Karweit, 1989a, b). Longitudinal studies of preschool do find long-term effects on dropout and other variables other than achievement (Berrueta-Clement, Schweinhart, Barnett, Epstein, & Weikart, 1984). However, preschool and extended-day kindergarten are not enough in themselves to ensure adequate academic performance.

In addition to preschool and kindergarten, the most crucial years of education are probably grades one, two, and three. During these years, students normally learn an enormous amount in a short period, particularly in reading. Those who fall significantly behind in reading before the

third grade are unlikely to catch up with their peers; for example, Chapter 1 reading programs typically have little or no effect on students beyond the third grade (Kennedy, Birman, & Demaline, 1987). Once students have become remedial readers, they are likely to be anxious about reading and poorly motivated to read.

There is evidence that reading failure can be prevented in the first grade. There are several programs which have shown strong positive effects on the reading performance of at-risk first graders (see Slavin, 1989). They all provide one-to-one tutoring to students who have been identified early in first grade as falling behind in reading. Studies by Dorval, Wallach, & Wallach (1978) and DeFord, Pinnell, Lyons, & Young (1987) have shown that tutoring programs can bring at-risk students up to normal reading levels. A longitudinal study of one program, Reading Recovery, found that students who received tutoring in the first grade still performed significantly better than matched controls by the third grade, although the difference between tutored and non-tutored students diminished each year (DeFord et al., 1987).

While the effects of the first grade tutoring programs are impressive, there is still a question of whether they are in themselves enough to ensure the success of all children. These programs do not typically impact on or coordinate with the regular reading program; larger and longer-lasting effects might be produced if they did. Students whose problems include poor attendance, behavior problems, or family problems are unlikely to be successful in tutoring alone. Following up the tutoring experience with effective classroom programs in grades 2-5 seems essential to maintain initial gains, and some students may require tutoring or other services beyond the first grade.

If we are serious about ensuring the success of *every* child, of holding as many children as possible out of special education or long-term remediation, it is likely that comprehensive schoolwide restructuring will be needed, particularly in inner-city schools in which large numbers of students have serious academic and social problems. This restructuring would have to focus on curriculum, on instructional methods, on family support, on assessment, and on

remediation (see Bloom, 1981).

This paper describes a program designed to bring every child in an inner-city elementary school to the third grade with adequate reading, mathematics, and language skills. The program, called Success for All, concentrates resources in grades pre-K to 3 and utilizes instructional programs based on the best available research evidence to attempt to guarantee every child a level of basic skills sufficient to serve as a basis for success in the later grades.

The Success for All program grew out of a unique collaboration between the Baltimore City Public Schools and the Center for Research on Elementary and Middle Schools at The Johns Hopkins University. Baltimore's then School Board President, Robert Embry, and Superintendent Alice Pinderhughes commissioned Kalman Hettleman, currently an advisor to Baltimore Mayor Kurt Schmoke, to work with us to design a program that would ensure success for every child. We later involved a planning committee composed of Clifton Ball, Carla Ford, Nancy Gimbel, James Sarnecki and other members of the BCPS Elementary Division to hammer out the details of the plan. We then identified a pilot school, Abbottston Elementary, a school of approximately 440 students, nearly all of whom are black and 76% of whom receive free lunch.

The program we developed is being introduced to the school over a two-year period, and is expected to remain in the school for at least five years. This paper presents the findings as of the end of the first year of implementation. The elements of Success for All as it was implemented at Abbottston during 1987-88 are described in the following section.

Success for All: Program Design

Our basic approach to designing a program to ensure success for all children begins with two essential principles: *prevention* and *immediate, intensive intervention*. That is, learning problems must first be prevented by providing children with the best available classroom programs and by engaging their parents in support of their school success. When learning problems do appear, corrective interventions must be immediate, intensive, and minimally disruptive to

students' progress in the regular program. That is, students receive help early on, when their problems are small. This help is intensive and effective enough to catch students up with their classmates so that they can profit from their regular classroom instruction. Instead of letting students fall further and further behind until they need special or remedial education or are retained in grade, students in Success for All are given whatever help they need to keep up in the basic skills.

Reading Tutors

One of the most important elements of the Success for All model is the use of tutors to support students' success in reading. One-to-one tutoring is the most effective form of instruction known (see Slavin, Karweit, & Madden, 1989). The tutors are certified teachers with experience teaching Chapter 1, special education, and/or primary reading. Tutors work one-on-one with students who are having difficulties keeping up with their reading groups. Students are taken from their homeroom classes by the tutors for 20-minute sessions during an hour-long social studies period. In general, tutors support students' success in the regular reading curriculum, rather than teaching different objectives. For example, if the regular reading teacher is working on long vowels, so does the tutor. However, tutors seek to identify learning deficits and use different strategies to teach the same skills.

During daily 90-minute reading periods, tutors serve as additional reading teachers to reduce class size for reading to about 15 (see below). Information on students' specific deficits and needs pass between reading teachers and tutors on brief forms, and reading teachers and tutors are given regular times to meet for purposes of coordinating their approaches with individual children.

Initial decisions about reading group placement and need for tutoring are made based on informal reading inventories given to each child by the tutors. After this, reading group placements and tutoring assignments are made based on eight-week assessments, which include

teacher judgments as well as more formal assessments. First graders receive first priority for tutoring, on the assumption that the primary function of the tutors is to help all students be successful in reading the first time, before they become remedial readers.

At Abbottston, a total of six tutors are provided for grades K-3, a total of approximately 300 students. They each work with a total of eleven students per day, so about 22% of all students in grades K-3 receive tutoring at any given time. However, since tutoring services are concentrated on first graders, approximately 40% of first graders receive tutoring at a time.

Reading Program

Students in grades 1-3 are regrouped for reading. That is, students are assigned to heterogeneous, age-grouped classes with class sizes of about 25 most of the day, but during a regular 90-minute reading period they are regrouped according to reading performance levels into reading classes of 15 students all at the same level. For example, a 2-1 reading class might contain first, second, and third grade students all reading at the same level.

The idea behind regrouping is to allow teachers to teach the whole reading class without having to break the class into reading groups. This greatly reduces the time needed for seatwork and increases direct instruction time. We do not expect reduction in class size to increase reading achievement by itself (see Slavin, 1988), but it does ensure that every reading class will be at only one reading level, eliminating workbooks, dittos, or other follow-up activities which are needed in classes with multiple reading groups. The regrouping is a form of the Joplin Plan, which has been found to increase reading achievement in the elementary grades (Slavin, 1987).

The reading program itself (Madden, Slavin, Livermon, Karweit, & Stevens, 1987) has been designed to take full advantage of having 90 minutes of direct instruction. The reading program emphasizes development of basic language skills and sound and letter recognition skills in kindergarten, and uses an approach based on sound blending and phonics starting in first grade (although kindergarten students who show readiness are accelerated into the first grade

program). Students in grades pre-K, kindergarten, and 1 experience the Peabody Language Development kits to help them build language concepts essential to later reading success. The K-1 reading program uses a series of phonetically regular minibooks and emphasizes oral reading to partners as well as to the teacher, instruction in story structure and specific comprehension skills, and integration of reading and writing. When they reach the 2-1 reading level, students use a form of Cooperative Integrated Reading and Composition (CIRC) with the district's Macmillan basal series. CIRC uses cooperative learning activities built around story structure, prediction, summarization, vocabulary building, decoding practice, writing, and direct instruction in reading comprehension skills. Research on CIRC has found it to significantly increase students' reading comprehension and language skills (Stevens, Madden, Slavin, & Farnish, 1987).

Eight-Week Reading Assessments

At least every eight weeks, reading teachers assess student progress through the reading program. The results of the assessments are used to determine who is to receive tutoring, to change students' reading groups, to suggest other adaptations in students' programs, and to identify students who need other types of assistance, such as family interventions or vision/hearing screening.

Preschool and Kindergarten

The Success for All school provides a half-day preschool and a full-day kindergarten for all eligible students. The focus of the preschool and kindergarten is on providing a balanced and developmentally appropriate learning experience for young children. The curriculum places a heavy emphasis on the development and use of language. It provides a balance of academic readiness and non-academic music, art, and movement activities. Readiness activities include use of the Peabody Language Development Kits and a program called Story Telling and Retelling (STaR) in which students retell stories read by the teachers (Karweit, 1988). Prereading

activities begin the the second semester of kindergarten.

Family Support Team

A Family Support Team consisting of two social workers and one parent liaison work full-time in the school. One of the social workers and the parent liaison are provided by the school system, while the other social worker is provided by the Baltimore City Department of Social Services. The Family Support Team provides parenting education and works to involve parents in support of their children's success in school. Also, family support staff are called on to provide assistance when there are indications that students are not working up to their full potential because of problems at home; for example, families of students who are not receiving adequate sleep or nutrition, need glasses, are not attending school regularly, or are exhibiting serious behavior problems, receive family support assistance.

Program Facilitator

A Program Facilitator works at the school full time to oversee (with the principal) the operation of the Success for All model. The facilitator helps plan the Success for All program, helps the principal with scheduling, and visits classes and tutoring sessions frequently to help teachers and tutors with individual problems. She works directly with the teachers on implementation of the curriculum, classroom management, and other issues, helps teachers and tutors deal with any behavior problems or other special problems, and coordinates the activities of the Family Support Team with those of the instructional staff.

Teachers and Teacher Training

The teachers and tutors are regular Baltimore City teachers. They received detailed teacher's manuals supplemented by two days of inservice at the begininng of the school year and several brief inservice sessions throughout the year on such topics as classroom management, instructional pace, and implementation of the curriculum.

Special Education

Every effort is being made to deal with students' learning problems within the context of the regular classroom, as supplemented by tutors. Special education resource services are still provided for students assigned to special education in previous years, but no new assignments to resource services are being made for reading problems, on the assumption that tutoring services available to all students will be more appropriate. Self-contained services for seriously handicapped students are being maintained for students whose needs cannot be met in the regular class. Because no new students were assigned to the resource program, Abbottston lost its special education resource teacher.

Advisory Committee

An advisory committee composed of the building principal, program facilitator, teacher representatives, one of the social workers, and Johns Hopkins staff meets regularly to review the progress of the program and to identify and solve any problems that arise.

Evaluation Results

Implementation of Success for All at Abbottston Elementary began in September, 1987 and is expected to remain at the school for at least five years. The program evaluation compares Abbottston students to those in a nearby school matched on percent of students receiving free lunch and historical achievement level. Then individual children were matched on the basis of standardized test scores. Fall Boehms and Metropolitans were used to match preschool and

kindergarten students, respectively, and spring California Achievement Tests (CAT's) were used to match students in grades 1-3.

Tables 1-2 Here

Preschool and Kindergarten. Preschool results (Table 1) indicated that Success for All children scored significantly higher than control on the Test of Language Development (TOLD) Picture Vocabulary and Sentence Imitation Scales, and on the Merrill Language Screening Test's Comprehension scale, with effect sizes (proportion of a standard deviation separating the experimental and control groups) ranging from .44 to .66. Success for All kindergarteners (Table 2) outscored control students on the TOLD Sentence Imitation and Grammatic Completion scales, the Woodcock Letter-Word Test and Word Attack scales, and the Merrill Language Screening Test. Effect sizes ranged from .47 to .71 except for Word Attack, which had an effect size of 3.74.

Tables 3-4 and Figure 1 Here

First Grade. Across five scales taken from the individually administered Woodcock and Durrell reading inventories (Table 3), first graders scored at an average grade equivalent of 2.0 (50th percentile), in comparison to 1.5 in the control group (28th percentile). Effect sizes averaged +.67. Among students who were in the lowest 25% on the pretests, Success for All students (Table 4) scored at the 32nd percentile, in comparison to the 8th percentile for similar control students, with an average effect size of +1.10. These results are summarized in Figure 1.

Despite the large effects seen on the more precise individually administered reading assessments, no effects were seen on the district's California Achievement Test scores. This discrepancy is ascribed to the close alignment of the district's reading program with the CAT, in contrast to the more phonetic approach taken in Success for All. First grade scores are particularly sensitive to curriculum alignment.

Tables 5-6 Here

Second Grade. At the second grade level, Success for All students significantly outscored control on the Woodcock Letter-Word Identification and Word Attack scales (Table 5), with an average effect size of +.28. Similar positive results were obtained on the district's CAT Comprehension scale and for the lowest 25% of students (Table 6). No difference was seen on the Durrell scales.

Tables 7-8 Here

Third Grade. The strongest effects of all were seen at the third grade level (Table 7), where Success for All third graders averaged 3.6 grade equivalents (47th percentile) in comparison to 2.4 (17th percentile). Effect sizes averaged +.95. Among the lowest 25% of third graders, Success for All students averaged at the 19th percentile, control at the 2nd, an effect size of +.99. The district's CAT scales also strongly favored Success for All in the third grade.

Table 9 Here

Overall Reading Outcomes. Averaging across all measures and grades 1-3 (Table 9), Success for All students outscored control by an average effect size of +.50, averaging at the 46th percentile (control students averaged at the 30th). On the more precise individually administered measures, the average effect size was +.63; Success for All students averaged at the 48th percentile while control students averaged at the 27th. Effects were particularly large for the lowest-achieving 25% of students, with effect sizes of +.65 overall and .80 for the individually administered measures. Low-achieving students in Success for All scored at the 24th percentile, while their control counterparts scored at the 11th overall and only at the 6th percentile on the individually administered measures.

Retentions. Part of the philosophy behind the Success for All program is a commitment to see that children reach the fourth grade *on time* with adequate skills. Rather than retaining students who are performing below grade level, the program is designed to continue to provide supportive services (particularly tutoring) indefinitely until the child is at or near grade level. This policy is based in part on research showing negative effects of retention in the elementary grades (e.g., Shepard & Smith, 1985). As a result of this policy, only one child was retained at Abbottston, and this occurred only because she was transferring to another school where continuing supportive services would not be available. This is in contrast to a retention rate of approximately 12% in the previous year in grades 1-3.

Special Education. Another key policy of the Success for All program was to avoid placing children in special education for learning problems except under the most extreme circumstances. This does not affect speech and language services, and students who are mentally retarded or severely emotionally disturbed are still referred for self-contained placements, but those with

milder academic handicaps, principally students who would ordinarily be categorized as learning disabled, are served in the regular program without special education involvement. The theory here is that enhanced classroom instruction, one-to-one tutoring in reading, family support services, and other aspects of the Success for All model will be superior to a special education resource program.

In practice, any children who are believed to have serious learning problems are brought to the attention of the program facilitator who then works with other staff to look closely at a given child to understand the problem and try out modifications in programming to meet the child's unique needs. The model here is much like that used in Teacher Assistance Teams, except that the school has many more options to special education placement than would ordinarily be available.

As a result of this policy concerning special education, both referrals and placements in special education were dramatically reduced at Abbottston. A comparison between the year before the program began and the first program year appears below.

	1986-87 *(Before Program)*	1987-88 *(First Program Year)*
Total Referrals	30	10
Assigned to Special Ed	12	7
Speech/Language	6	6
LD Resource	5	0
Self-contained	1	1

As the above chart indicates, far fewer students were referred for special education screening and were assigned to special education during the program's first year. Six of the seven assignments to special education were for speech and language; the one child assigned to a

self-contained program was an extremely emotionally disturbed child sent to a special school.

Can Success for All be Replicated?

Success for All is an expensive program. In 1987-88, Abbottston Elementary received $375,000 in federal Chapter 2 money to supplement its usual Chapter 1 allocation. At about $1,000 per child, this is a lot of money, although it is important to note that this is less than the difference in average per-pupil costs between Baltimore City and its surrounding suburban counties (suburban Baltimore County spends approximately $1,300 more per pupil each year than does Baltimore City; see Abell Foundation, 1989).

A common criticism of Success for All is that with this amount of money, anything would work. Yet this is manifestly untrue. For example, the costs of Success for All are less than the costs of halving class size (using Baltimore figures, halving class size would cost $1,277 per student in salaries alone). Yet research on such extreme reductions in class size find few achievement effects (see Slavin, 1988). For example, New York City found that the effect of halving class size in its first grades was not even statistically significant (Jarvis, Whitehurst, Gampert, & Schulman, 1987). In a Tennessee study which reduced class sizes in grades 1-3, positive effects found in the first grade disappeared in the second and third grades (Whittington, Bain, & Achilles, 1985; Dennis, 1987). Mean effect sizes for individually administered tests of reading at the kindergarten (+2.23), first (+.67), and third (+.95) grade levels already show Success for All to have stronger effects than the most successful class size study ever conducted, the first year of the Whittington et al. (1985) study in Tennessee (+.53).

It is somewhat premature to discuss the full importance of Success for All. The program's true effectiveness cannot be fully assessed until this year's preschoolers finish third grade, or even better until they move into middle and high school. However, let's assume for the moment that the effects of Success for All continue to be positive and that the program's goal of bringing all students to grade level is largely achieved.

There are two ways to look at the cost of Success for All. One is to say, "Let's bite the bullet and find the money. If we know we can prevent school failure, we must do so. Besides, investing in the success of young children will pay off in the long run in terms of reducing the need for special education, for retention, and for long-term remedial services." The other way to look at the cost is to find ways to build an adequate version of the program for less money.

The "bite the bullet" school of thought has much to recommend it. There is a great deal of evidence that neither traditional Chapter 1 services nor special education programs for students with mild academic handicaps produce anything more than small effects on student achievement, particularly for students above the fourth grade level (see Slavin, Karweit, & Madden, 1989). Simply by shifting existing compensatory and special education resources to the early grades it is possible to fund a credible version of Success for All. The Baltimore City Public Schools have done exactly this in their 1988-89 Chapter 1 plan, and have expanded Success for All to a total of six high-poverty schools, four of which have only small supplements to their Chapter 1 schoolwide funds. Further, it seems likely that if legislators and taxpayers perceive that an investment in the success of young children will pay off, they will find the additional funds. Both within and without the educational community there is a widespread belief that more money for urban schools is money down a rathole. If reliable means of turning money into student success can be found, this perception may change.

However, the "do it cheaper" philosophy also has merit. The most expensive elements of Success for All (on a per-pupil basis) are not the tutors but provision of preschool and extended-day kindergarten. In schools in which preschool or extended-day kindergarten are already provided, the program costs are greatly reduced. Otherwise, compromising on preschool or kindergarten and reducing family support and tutoring services, a workable form of Success for All could still be feasible, especially in schools which qualify for Chapter 1 schoolwide services (i.e., at least 75% of their students receive free lunch). As noted earlier, four additional Baltimore City elementary schools are currently implementing a form of the Success for All model which

can be funded almost entirely by Chapter 1, with additional money for a half-time facilitator and instructional materials (a total of about $30,000 per school, or $60 per student, in addition to Chapter 1).

Implications of Success for All for Compensatory and Special Education

This paper presents the results of only the first year of a five-year study of Success for All. However, the results obtained so far have important implications for compensatory and special education.

At a minimum, Success for All provides an effective model for schoolwide projects now likely to be expanding under new Chapter 1 legislation. While the pilot school did receive additional funding over and above its usual Chapter 1 allocation, large school districts can provide adequate funds to implement a viable form of the program by shifting Chapter 1 funds toward the early grades and toward the most disadvantaged schools. The Baltimore City Public Schools have done this in their 1988-89 Chapter 1 plan, and are expanding Success for All to a total of six schools.

In the first year Success for All brought children at all grade levels to about the 50th percentile on individually-administered measures (the control school averaged at about the 28th). This is good, but it does not yet fulfill the commitment to bring *every* child to grade level in the basic skills. Not until this year's preschoolers have reached the third grade can this commitment be assessed. Also, long-term effects of the program must be determined to see if early success does in fact eliminate or greatly reduce the need for continuing remedial or special education services.

If, however, Success for All is ultimately found to meet its promise to provide all children with adequate skills, the implications for compensatory and special education could be dramatic. If it could be shown that high rates of learning problems are not inevitable consequences of poverty but could be prevented by the schools, the political calculus surrounding compensatory education would be greatly altered. Withholding proven, effective interventions from students at

risk might be seen as tantamount to withholding effective medications from children with curable diseases. Special education could get out of the extremely expensive and largely ineffective business of serving large numbers of students categorized as "learning disabled" and instead concentrate its efforts on the truly handicapped.

It is far too early to claim that the particulars of the Success for All program are all necessary or optimal. As the program develops over time there will certainly be many changes. As of this writing, the program is being extended to grades 4-5, a language arts/writing program and a mathematics program are being added, the family support model is being revised, and studies are under way to evaluate the reading curriculum by itself (without the other services), to evaluate a streamlined, less expensive form of the program, and to evaluate the effects of the program in the poorest school in Baltimore. Yet what is more important than the technical details of our approach is the commitment to the success of *all*, the idea that we will simply not tolerate failure. Only when we accept this commitment can research and development efforts begin to create practical means of ensuring that children start their school careers with successful experiences in mastering the basic skills.

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Table 1
Comparison of Achievement Test Scores of Matched
Success for All (SFA) and Control (CTL) Schools

Prekindergarten (N=43 pairs)

Test	SFA X (S.D.)	CTL X (S.D.)	F p	Effect Size
Boehm (Pretest)	20.7 (7.0)	21.3 (5.7)	0.2 p<.64	-.11
TOLD (Test Of Language Development) Picture Vocabulary	10.6 (3.8) 63rd %ile	8.6 (3.9) 25th %ile	4.6 p<.04	.51
TOLD Sentence Imitation	6.6 (5.2) 37th %ile	4.5 (2.9) 25th %ile	4.9 p<.03	.73
TOLD Grammatic Completion	5.4 (4.7) 37th %ile	4.2 (3.7) 37th %ile	1.3 p<.26	.32
Merrill Language Screening Test Comprehension	3.4 (1.4)	2.6 (1.4)	7.2 p<.01	.52

Table 2
Comparison of Achievement Test Scores of Matched Success for All (SFA) and Control (CTL) Schools

Kindergarten (N=60 pairs)

Test	SFA X (S.D.)	CTL X (S.D.)	F p	Effect Size
Metropolitan Achievement Test (Pretest)	68.8 (19.3)	69.5 (15.6)	0.5 p<.48	.04
TOLD (Test Of Language Development) Picture Vocabulary	11.5 (4.3) 37th %ile	10.5 (4.2) 25th %ile	1.3 p<.26	.24
TOLD Sentence Imitation	8.7 (5.4) 25th %ile	6.4 (3.9) 16th %ile	5.0 p<.03	.59
TOLD Grammatic Completion	8.9 (5.9) 25th %ile	5.6 (4.8) 16th %ile	10.1 p<.00	.69
Merrill Language Screening Test	3.7 (1.2)	3.0 (1.5)	8.3 p<.01	.47
Woodcock Language Proficiency Battery Letter-Word Test	8.3 (5.0) G.E. 1.0	5.8 (2.7) G.E. .7	8.1 p<.01	.93
Woodcock Word Attack	1.6 (2.0) G.E. 1.5	0.1 (0.4) G.E. .8	35.9 p<.00	3.75

Table 3
Comparison of Achievement Test Scores of Matched Success for All (SFA) and Control (CTL) Schools

First Grade, Total Sample (N=59 pairs)

Test	Mean SFA (S.D.)	Mean CTL (S.D.)	F p	Effect Size
Metropolitan Spr '87 (Pretest)	95.34 (7.69)	95.69 (7.82)	F=.062 p=.804	-.04
Woodcock Picture Vocabulary	11.12 (3.12) G.E. 1.3	9.61 (2.64) G.E. .7	F=8.73 p=.004	.59
Woodcock Letter-Word Identification	20.73 (5.88) G.E. 2.5	18.20 (4.37) G.E. 2.0	F=6.53 p=.012	.58
Woodcock Word Attack	6.95 (4.50) G.E. 2.4	2.98 (2.86) G.E. 1.7	F=31.41 p=.000	1.39
Durrell Oral Reading	6.66 (4.42) G.E. 1.8	5.36 (3.82) G.E. 1.6	F=4.02 p=.047	.34
Durrell Silent Reading (Comprehension)	6.05 (4.07) G.E. 1.8	4.31 (4.04) G.E. 1.5	F=8.03 p=.005	.43
Individually Administered Tests				
Mean Grade Equivalent	2.0	1.5		
Mean Percentile	50	28		
Mean Effect Size	+.67			
CAT Reading Comprehension	19.96 (6.35) G.E. 1.7	19.31 (5.90) G.E. 1.7	F=.696 p=.406	.11
CAT Reading Vocabulary	20.11 (6.72) G.E. 1.6	20.67 (5.59) G.E. 1.6	F=.19 p=.664	-.10
All Measures				
Mean Grade Equivalent	1.9	1.5		
Mean Percentile	47	31		
Mean Effect Size	+.48			

Table 4
Comparison of Achievement Test Scores of the Lowest 25% of Matched Success for All (SFA) and Control (CTL) Schools

First Grade, Lowest 25% (N=15 pairs)

Test	Mean SFA (S.D.)	Mean CTL (S.D.)	F p	Effect Size
Metropolitan Spr '87 (Pretest)	85.5 (3.78)	85.1 (4.39)	F=.072 p=.791	.09
Woodcock Picture Vocabulary	11.07 (3.35) G.E. 1.3	8.07 (2.05) G.E. .5	F=8.75 p=.006	1.46
Woodcock Letter-Word Identification	17.13 (5.96) G.E. 1.5	15.40 (4.10) G.E. 1.3	F=.86 p=.36	.42
Woodcock Word Attack	5.27 (4.85) G.E. 2.1	1.80 (2.60) G.E. 1.4	F=5.50 p=.02	1.34
Durrell Oral Reading	5.00 (4.42) G.E. 1.6	2.67 (2.35) G.E. 1.3	F=2.59 p=.12	.99
Durrell Silent Reading (Comprehension)	4.57 (4.54) G.E. 1.6	1.71 (2.20) G.E. 1.2	F=4.65 p=.041	1.30
Individually Administered Tests				
Mean Grade Equivalent	1.7	1.2		
Mean Percentile	38	8		
Mean Effect Size	+1.10			
CAT Reading Comprehension	15.33 (5.86) G.E. 1.4	14.69 (4.84) G.E. 1.4	F=.022 p=.884	.13
CAT Reading Vocabulary	14.47 (6.06) G.E. 1.3	17.15 (5.68) G.E. 1.4	F=1.79 p=.193	-.47
All Measures				
Mean Grade Equivalent	1.6	1.2		
Mean Percentile	32	11		
Mean Effect Size	+.74			

Table 5
Comparison of Achievement Test Scores of Matched Success for All (SFA) and Control (CTL) Schools

Second Grade, Total Sample (N=65 pairs)

Test	Mean SFA (S.D.)	Mean CTL (S.D.)	F p	Effect Size
CAT Spring '87 (Pretest)	97.74 (17.52)	98.13 (17.78)	F=.064 p= .80	-.02
Woodcock Letter-Word Identification	26.55 (5.48) G.E. 2.5	23.77 (6.13) G.E. 2.0	F=14.74 p=.000	.45
Woodcock Word Attack	8.58 (6.36) G.E. 2.6	6.11 (5.31) G.E. 2.2	F=9.11 p=.003	.47
Durrell Oral Reading	10.84 (4.76) G.E. 2.7	10.24 (4.44) G.E. 2.6	F=1.932 p=.167	.14
Durrell Silent Reading (Comprehension)	10.16 (5.03) G.E. 2.6	9.76 (5.54) G.E. 2.4	F=.663 p=.428	.07
Individually Administered Tests				
Mean Grade Equivalent	2.6	2.3		
Mean Percentile	46	36		
Mean Effect Size		+.28		
CAT Reading Comprehension	14.43 (4.30) G.E. 2.7	13.20 (5.28) G.E. 2.5	F=4.00 p=.048	.23
CAT Reading Vocabulary	11.49 (3.70) G.E. 2.5	11.66 (3.60) G.E. 2.5	F=.016 p=.90	-.05
All Measures				
Mean Grade Equivalent	2.6	2.3		
Mean Percentile	45	37		
Mean Effect Size		+.22		

Table 6
Comparison of Achievement Test Scores of the Lowest 25% of Matched Success for All (SFA) and Control (CTL) Schools

Second Grade, Lowest 25% (N=16 pairs)

Test	Mean SFA (S.D.)	Mean CTL (S.D.)	F p	Effect Size
CAT Spring '87 (Pretest)	76.18 (7.79)	76.00 (8.01)	F=.005 p= .95	-.02
Woodcock Letter-Word Identification	22.19 (3.64) G.E. 2.0	20.50 (4.32) G.E. 1.7	F=1.493 p=.232	.39
Woodcock Word Attack	4.69 (2.06) G.E. 1.9	2.25 (3.34) G.E. 1.7	F=6.325 p=.018	.73
Durrell Oral Reading	7.00 (2.54) G.E. 2.0	7.33 (3.46) G.E. 2.0	F=.153 p=.698	-.09
Durrell Silent Reading (Comprehension)	6.19 (2.71) G.E. 1.8	5.44 (3.25) G.E. 1.6	F=.508 p=.482	.23
Individually Administered Tests				
Mean Grade Equivalent	2.0	1.8		
Mean Percentile	14	8		
Mean Effect Size	+.32			
CAT Reading Comprehension	11.81 (3.67) G.E. 2.4	9.25 (5.35) G.E. 2.1	F=2.60 p=.118	.48
CAT Reading Vocabulary	8.31 (3.66) G.E. 2.0	9.12 (3.60) G.E. 2.2	F=.433 p=.516	-.19
All Measures				
Mean Grade Equivalent	2.0	1.9		
Mean Percentile	20	15		
Mean Effect Size	+.26			

Table 7
Comparison of Achievement Test Scores of Matched Success for All (SFA) and Control (CTL) Schools

Third Grade, Total Sample (N=44 pairs)

Test	Mean SFA (S.D.)	Mean CTL (S.D.)	F p	Effect Size
CAT Spring '87 (Pretest)	140.18 (23.29)	142.77 (18.74)	F=.330 p=.567	-.14
Woodcock Letter-Word Identification	32.00 (5.25) G.E. 4.0	26.93 (6.50) G.E. 2.5	F=21.27 p=.000	.78
Woodcock Word Attack	11.91 (5.87) G.E. 3.9	5.20 (4.73) G.E. 2.1	F=40.657 p=.003	1.42
Durrell Oral Reading	14.81 (6.39) G.E. 3.4	10.93 (4.29) G.E. 2.6	F=16.66 p=.000	.90
Durrell Silent Reading (Comprehension)	13.93 (7.90) G.E. 3.3	10.15 (5.32) G.E. 2.5	F=10.35 p=.002	.71
Individually Administered Tests				
Mean Grade Equivalent	3.6	2.4		
Mean Percentile	47	17		
Mean Effect Size	+.95			
CAT Reading Comprehension	20.88 (4.01) G.E. 3.3	17.69 (5.10) G.E. 2.8	F=18.60 p=.000	.63
CAT Reading Vocabulary	11.79 (3.37) G.E. 3.5	10.57 (3.10) G.E. 3.2	F=6.93 p=.010	.39
All Measures				
Mean Grade Equivalent	3.6	2.6		
Mean Percentile	45	21		
Mean Effect Size	+.81			

Table 8
Comparison of Achievement Test Scores of the Lowest 25% of Matched Success for All (SFA) and Control (CTL) Schools

Third Grade, Lowest 25% (N=11 pairs)

Test	Mean SFA (S.D.)	Mean CTL (S.D.)	F p	Effect Size
CAT Spring '87 (Pretest)	109.82 (6.08)	119.73 (8.65)	F=9.662 p=.006	-1.15
Woodcock Letter-Word Identification	28.00 (3.92) G.E. 2.7	21.00 (8.51) G.E. 1.9	F=2.328 p=.147	.82
Woodcock Word Attack	10.40 (5.78) G.E. 3.0	2.45 (3.27) G.E. 1.7	F=11.186 p=.004	2.43
Durrell Oral Reading	9.50 (3.50) G.E. 2.4	6.90 (4.23) G.E. 1.9	F=1.774 p=.202	.61
Durrell Silent Reading (Comprehension)	10.55 (3.08) G.E. 2.6	6.18 (4.42) G.E. 1.8	F=7.162 p=.017	.99
Individually Administered Tests				
Mean Grade Equivalent	2.7	1.8		
Mean Percentile	19	2		
Mean Effect Size	+.99			
CAT Reading Comprehension	17.40 (3.66) G.E. 2.7	13.55 (4.59) G.E. 2.2	F=1.83 p=.193	.84
CAT Reading Vocabulary	8.40 (2.95) G.E. 2.6	8.18 (2.99) G.E. 2.5	F=.022 p=.884	.07
All Measures				
Mean Grade Equivalent	2.7	2.0		
Mean Percentile	21	7		
Mean Effect Size	+.96			

Table 9
Summary of Achievement Test Scores of Matched
Success for All (SFA) and Control (CTL) Schools

Grades 1-3, Total Sample (N=168 pairs)

	SFA		Control
Individually Administered Tests			
Mean Percentile	48		27
Mean Effect Size		+.63	
All Measures			
Mean Percentile	46		30
Mean Effect Size		+.50	

Grades 1-3, Lowest 25% (N=42 pairs)

	SFA		Control
Individually Administered Tests			
Mean Percentile	24		6
Mean Effect Size		+.80	
All Measures			
Mean Percentile	24		11
Mean Effect Size		+.65	

FIGURE 1

MEAN READING SCORES FOR SUCCESS FOR ALL AND CONTROL SCHOOLS